

IN THE CLAIMS:

Applicants, pursuant to 37 C.F.R. § 1.121, submit the following amendments to the claims:

1. (Currently amended) A diagnostic or prognostic assay for cancer, comprising:
 - (a) obtaining a tissue sample from a test tissue;
 - (b) performing a methylation assay on DNA from the tissue sample, wherein the methylation assay determines the methylation state of a CpG dinucleotide within at least one DNA sequence selected from the group consisting of SEQ ID NOS:36 and 37 [[34-38]], and coordinately methylated contiguous CpG island sequences that comprise a DNA sequence selected from the group consisting of SEQ ID NOS:36 and 37 ~~contiguous with, or encompassing at least one nucleotide of SEQ ID NOS:35-38~~, wherein a CpG island sequence is a contiguous sequence of about 0.2 to about 1 kb in length that satisfies the criteria of having both a frequency of CpG dinucleotides corresponding to an Observed/Expected Ratio >0.6, and a GC Content >0.5; and
 - (c) determining a diagnosis or prognosis based, at least in part, upon the methylation state of the CpG dinucleotide within the DNA sequence, compared to that of control DNA, wherein the determined methylation state is either hypermethylation or normal methylation, and wherein the cancer is ~~prostate~~, breast or colon cancer.
2. (Currently amended) The diagnostic or prognostic assay of claim 1, wherein the DNA sequence is a sequence selected from the group consisting of contiguous CpG island sequences that comprise a DNA sequence selected from the group consisting of SEQ ID NOS:36 and 37 ~~contiguous with, or encompassing at least one nucleotide of SEQ ID NOS:35-38~~.
3. (Cancelled).
4. (Previously amended) The diagnostic or prognostic assay of claim 1 wherein the methylation assay procedure is selected from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.
5. (Cancelled).
6. (Cancelled).
7. (Previously amended) A kit useful for the detection of a methylated CpG-containing nucleic acid comprising a carrier means containing one or more containers comprising:
 - (a) a container containing a probe or primer which hybridizes to any region of at least 12 contiguous nucleotides of a sequence selected from the group consisting of SEQ ID NOS:34-37,

and 38; and

(b) additional standard methylation assay reagents required to affect detection of methylated CpG-containing nucleic acid based, at least in part, on the probe or primer.

8. (Previously amended) The kit of claim 7, wherein the additional standard methylation assay reagents are standard reagents for performing a methylation assay from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

9. (Previously amended) The kit of claim 7, wherein the probe or primer comprises at least 12 contiguous nucleotides of a sequence selected from the group consisting of SEQ ID NOS:34-37, and 38.

10. (Previously amended) An isolated nucleic acid molecule comprising a methylated or unmethylated polynucleotide sequence selected from the group consisting of sequences of SEQ ID NO:34, SEQ ID NO:37, and SEQ ID NO:38.

11. (Original) The nucleic acid of claim 10, wherein the nucleic acid is methylated.

12. (Original) The nucleic acid of claim 10, wherein the nucleic acid is unmethylated.

13. (New) A diagnostic or prognostic assay for cancer, comprising:

(a) obtaining a tissue sample from a test tissue;

(b) performing a methylation assay on DNA from the tissue sample, wherein the methylation assay determines the methylation state of a CpG dinucleotide within at least one DNA sequence selected from the group consisting of SEQ ID NO:37, and coordinately methylated contiguous CpG island sequences that comprise a DNA sequence selected from the group consisting of SEQ ID NO:37, wherein a CpG island sequence is a contiguous sequence of about 0.2 to about 1 kb in length that satisfies the criteria of having both a frequency of CpG dinucleotides corresponding to an Observed/Expected Ratio >0.6, and a GC Content >0.5; and

(c) determining a diagnosis or prognosis based, at least in part, upon the methylation state of the CpG dinucleotide within the DNA sequence, compared to that of control DNA, wherein the determined methylation state is either hypermethylation or normal methylation, and wherein the cancer is prostate, breast or colon cancer.

14. (New) The diagnostic or prognostic assay of claim 1, wherein the DNA sequence is a sequence selected from the group consisting of contiguous CpG island sequences that comprise a DNA sequence selected from the group consisting of SEQ ID NO:37.

15. (New) The diagnostic or prognostic assay of claim 1 wherein the methylation assay

procedure is selected from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.